

Appn. No. 10/712,700

Attorney Docket No. 10541-1918

I. Listing of Claims

1. (Canceled)
2. (Currently Amended): Combined cooling plant/heat pump of claim [[1]] 10 wherein the ~~internal heat exchanger system in the refrigerant circuit with said two functional units is structurally designed as a heat exchanger.~~
3. (Currently Amended): Combined cooling plant/heat pump of claim [[1]] 10 wherein said first and second functional units are integrated into the cooling plant/heat pump circuit over a 3/2-multi-way valve and a 4/2-multi-way valve.
4. (Currently Amended): Combined cooling plant/heat pump of claim [[1]] 10 wherein said first and second functional units are connected to each other by a two-way expansion element having a bypass, and a second two-way expansion valve having a bypass being provided in the refrigerant circuit.
5. (Currently Amended): Combined cooling plant/heat pump of claim [[1]] 10 wherein as a heat source for the heat pump operation a coupling heat exchanger is provided thermally coupled to the refrigerant circuit of the cooling plant/heat pump and a coolant circuit of the engine cooling system, whereby heat is transferred from the coolant circuit of the engine cooling system to the refrigerant circuit of the cooling plant/heat pump.



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6. (Currently Amended): Combined cooling plant/heat pump of any of the claim [[1]] 10 wherein an air heat exchanger is provided as heat source for the heat pump operation, in heat pump operation said air heat exchanger transferring heat from the air to the refrigerant circuit of the cooling plant/heat pump.

7. (Currently Amended): Combined cooling plant/heat pump of claim [[1]] 10 wherein an the internal heat exchanger system and is additionally provided with a separate heating heat exchanger of the engine cooling system is additionally provided in within the ventilation system.

8. (Canceled)

9. (Original): A method of operating a combined cooling plant/heat pump comprising the steps of dividing, in combined dehumidification-reheating operation, refrigerant mass flow downstream of a compressor into partial flows, directing one partial flow for the reheating at a first functional unit and directing another partial flow for the dehumidification at a second functional unit.

10. (Original): A combined cooling plant/heat pump for use in motor vehicles to cool, heat and dehumidify the vehicle interior, said combined cooling plant/heat pump comprising:

a ventilation system adapted to provide air to the vehicle interior;

a refrigeration circuit including a heat exchanger having a first functional unit and a second functional unit located within the ventilation system, both of said first

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and second functional units being a condenser during heat pump operation of said combined cooling plant/heat pump, both of said first and second functional units being an evaporator during cooling plant operation of said combined cooling plant/heat pump, and one of said first and second functional units being an evaporator and the other of the first and second functional units being a condenser during combined dehumidification-reheating operation of said combined cooling plant/heat pump.

